IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Ikemoto et al.

Application No. Unassigned

Art Unit: Unassigned
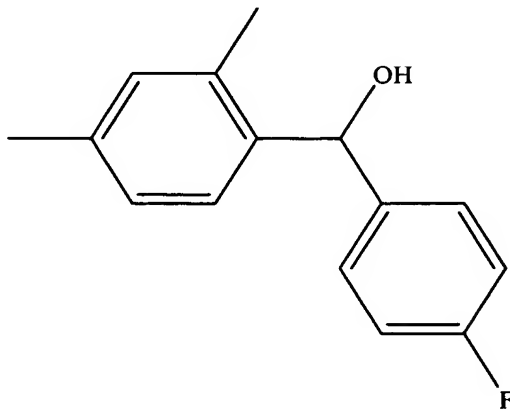
Examiner: Unassigned

Filed: February 28, 2002

For: PRODUCTION METHOD OF CITALOPRAM,
         INTERMEDIATE THEREFOR AND PRODUCTION
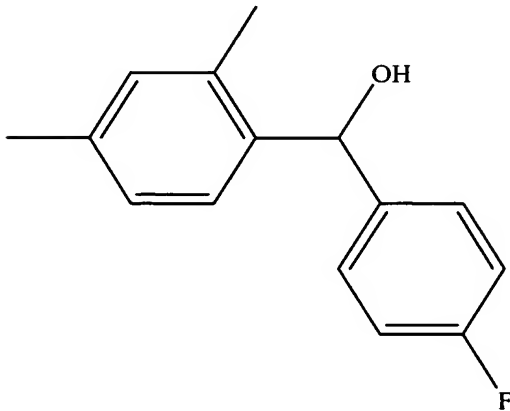   METHOD OF THE INTERMEDIATE

PENDING CLAIMS AFTER ENTRY OF PRELIMINARY AMENDMENT

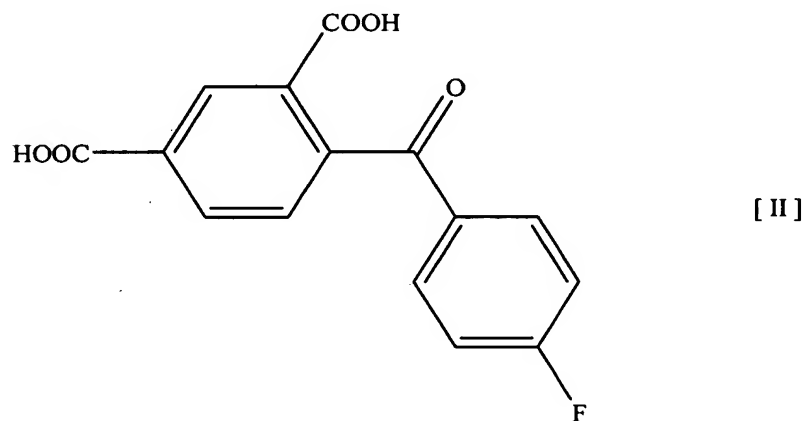1.   A compound of the formula [I]

[I]

2.   A production method of a compound of the formula [I]
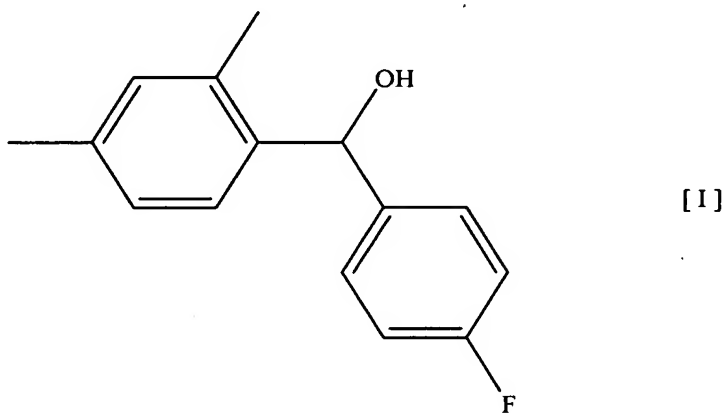

[I]

which comprises converting 4-bromofluorobenzene to 4-fluorophenylmagnesium bromide, and reacting the 4-fluorophenylmagnesium bromide with 2, 4-dimethylbenzaldehyde.

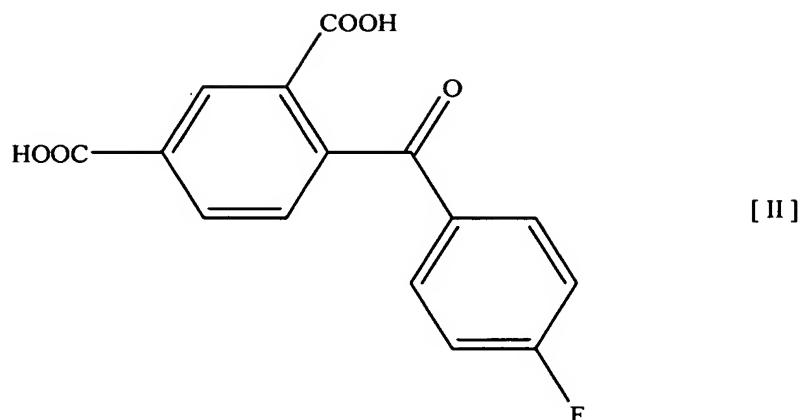3.   A production method of a compound of the formula [II]

[II]

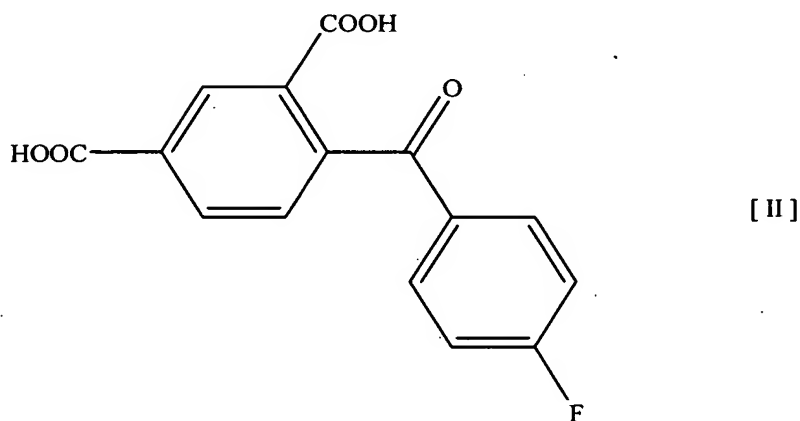which comprises oxidizing a compound of the formula [I]

[I]

4.   A production method of 1,3-dimethyl-4-(4'-fluorobenzoyl)benzene, which comprises subjecting m-xylene as a starting material and solvent to Friedel-Crafts reaction with 4-fluorobenzoyl halide.

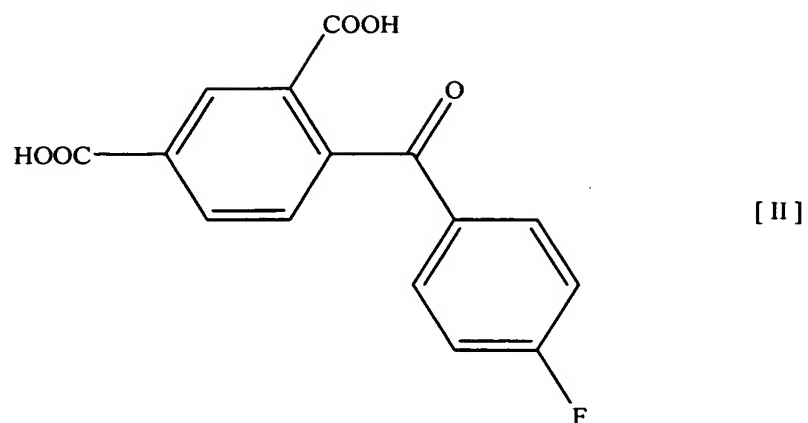5.   A production method of a compound of the formula [II]

[II]

which comprises subjecting m-xylene as a starting material and solvent to Friedel-Crafts reaction with 4-fluorobenzoyl halide to give 1, 3-dimethyl-4-(4'-fluorobenzoyl)benzene and oxidizing said 1, 3-dimethyl-4- (4'-fluorobenzoyl)benzene.

6.   A production method of a compound of the formula [II]
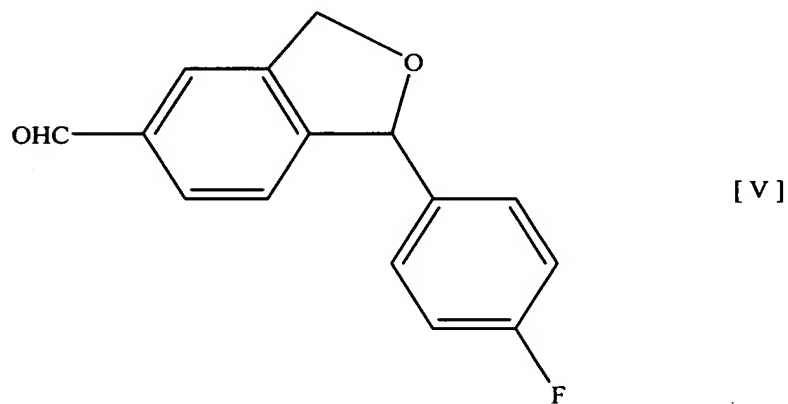

[II]

which comprises subjecting 2,4-dimethylbenzoyl halide to Friedel-Crafts reaction with fluorobenzene to give 1,3-dimethyl-4-(4'-fluorobenzoyl)benzene and oxidizing said 1,3-dimethyl-4-(4'-fluorobenzoyl)benzene.

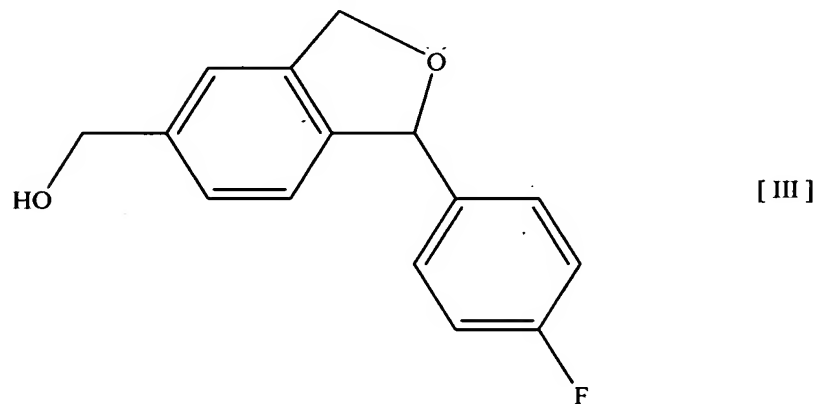7.   A production method of a compound of the formula [II]

[II]

which comprises subjecting trimellitic anhydride to Friedel-Crafts reaction with fluorobenzene in a dichloro-substituted or trichloro-substituted benzene solvent.

17. A production method of a compound of the formula [V]

[V]

which comprises oxidizing a compound of the formula [III]

[III]

with manganese dioxide.